

CLAIMS

1. (Currently amended) Diagnostic procedure for identification of a disorder of pancreatic function in a patient comprising determining ~~the a~~ content of one or more human pancreatic elastase iso-enzyme in the patient's serum, secretions, ~~or excretions, stool or body fluids~~ by means of an immunochemical system ~~using which comprises~~ polyclonal antibodies raised against one or more synthetic peptide selected from the group consisting of

NH₂-A-V-K-E-G-P-E-Q-V-I-P-I-N-COOH (SEQ ID NO: 2)

NH₂-Y-T-N-G-P-L-P-D-K-L-Q-Q-A-R-COOH (SEQ ID NO: 3)

NH₂-R-S-G-C-N-G-D-S-G-G-P-L-N-COOH (SEQ ID NO: 5), and

NH₂-G-P-L-N-C-P-T-E-D-G-G-W-Q-COOH (SEQ ID NO: 4)

wherein said polyclonal antibodies cannot recognize an elastase fragment with the amino-acid sequence Thr-Met-ValAla-Gly-Gly-Asp-Ile-Arg (SEQ ID NO: 1),

wherein said polyclonal antibodies that react specifically with a human pancreatic elastase iso-enzyme ~~elastase~~ in a patient's serum, secretions, excretions, stool or body fluids are induced by immunization of a vertebrate animal ~~that comprises~~ administering one or more of said synthetic peptides ~~A-V-K-E-G-P-E-Q-V-I-P-I-N (SEQ ID NO: 2);~~

~~Y-T-N-G-P-L-P-D-K-L-Q-Q-A-R (SEQ ID NO: 3);~~

~~R-S-G-C-N-G-D-S-G-G-P-L-N (SEQ ID NO: 5) and~~

~~G-P-L-N-C-P-T-E-D-G-G-W-Q (SEQ ID NO: 4) or immunogenic portions of these peptides to a~~ the vertebrate animal, inducing ~~the a~~ formation of antibodies, and separating and purifying the formed antibodies against human pancreatic elastase iso-enzyme.

2. Cancelled

3. (Currently amended) The procedure according to claim 1, ~~comprising obtaining antibodies~~ by wherein

~~a) immunizing an~~ the vertebrate animal is selected from rabbit, guinea pig, goat, chicken and fish ~~with one or more of the synthetic peptides of claim 1;~~

b) ~~separating and purifying the formed antibodies, thereby obtaining polyclonal antibodies that react specifically with one or more elastase iso-enzyme in and wherein the patient's serum, secretions or excretions are~~ stool or body fluids.

4.- 5. Cancelled

6. (Currently amended) Immunological test kits for a diagnosis and progress check of pancreatic diseases ~~of the pancreas~~ of a patient using stool or body fluids containing polyclonal antibodies, where the antibodies are single specific antibodies or cross-reactive antibodies raised against one or more synthetic peptide selected from the group consisting of

NH₂-A-V-K-E-G-P-E-Q-V-I-P-I-N-COOH (SEQ ID NO: 2)

NH₂-Y-T-N-G-P-L-P-D-K-L-Q-Q-A-R-COOH (SEQ ID NO: 3)

NH₂-R-S-G-C-N-G-D-S-G-G-P-L-N-COOH (SEQ ID NO: 5), and

NH₂-G-P-L-N-C-P-T-E-D-G-G-W-Q-COOH (SEQ ID NO: 4),

that can recognize an elastase iso-enzyme but not the amino-acid sequence Thr-Met-Val-Ala-Gly-Gly-Asp-Ile-Arg (SEQ ID NO: 1).

7. (Cancelled)

8. (Previously presented) The procedure according to claim 1, comprising coupling peptides with carrier substances before administration to the vertebrate.

9. (Previously presented) The procedure according to claim 1, wherein the vertebrate is a chicken.

10. (Cancelled)

11. (Cancelled)

12. (Previously Presented) Synthetic peptide A-V-K-E-G-P-E-Q-VI-P-I-N (SEQ ID NO: 2).

13. (Previously Presented) Synthetic peptide Y-T-N-G-P-L-P-D-KL-Q-Q-A-R (SEQ ID NO: 3).

14. (Previously Presented) Synthetic peptide R-S-G-C-N-G-D-S-GG-P-L-N (SEQ ID NO: 5).

15. (Previously Presented) Synthetic peptide G-P-L-N-C-P-T-E-DG-G-W-Q (SEQ ID NO: 4).

16. Cancelled

17. (Currently amended) Immunological test kits for diagnosis and progress check of pancreatic diseases ~~of the pancreas~~ and of mucoviscidosis using stool or body fluids comprising one or more antibody induced by one or more synthetic peptides selected from the group consisting of:
NH2-A-V-K-E-G-P-E-Q-V-I-P-I-N-COOH (SEQ ID NO: 2)

NH2-Y-T-N-G-P-L-P-D-K-L-Q-Q-A-R-COOH (SEQ ID NO: 3)

NH2-R-S-G-C-N-G-D-S-G-G-P-L-N-COOH (SEQ ID NO: 5), and

NH2-G-P-L-N-C-P-T-E-D-G-G-W-Q-COOH (SEQ ID NO: 4)

which antibodies are bound to a carrier and recognize at least one elastase iso-enzyme but which cannot recognize the amino-acid sequence Thr-Met-Val-Ala-Gly-Gly-Asp-Ile-Arg (SEQ ID NO: 1).

18. (Currently amended) ~~The~~ immunological test kits ~~for diagnosis and progress check of diseases of the pancreas and of mucoviscidosis using stool or body fluids according to~~ of claim 17, wherein 2 or more different antibodies bound to one or more carrier are used and the test kit is a Sandwich-ELISA test kit.

19. (Previously Presented) The procedure of claim 8 where the immunization procedure comprises coupling peptides to hemocyanin.

20-23. (cancelled)

24. (Currently amended) The diagnostic procedure of claim 1 in which the ~~pancreatic elastase~~
human pancreatic elastase isoenzyme is pancreatic elastase III.